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Submitted with Request for Continued Examination

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Docket No. TUC920010058US1
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A method for controlling and providing access to a files maintained at remote storage locations to a remote computer source code management system client over a network, the method comprising:
 - maintaining metadata about files maintained at remote storage locations;
 - receiving a request, at a server, for checking-out a file corresponding to a filename, from the remote computer source code management system client over the network, wherein the request includes a filename corresponding to a requested file;
 - determining from the metadata, by the server, one a remote storage location address associated with the filename where the requested file is located, wherein the metadata corresponds to the files and is stored more proximate to the server than to the source code management system client, and wherein the remote storage location address is based on a history of request patterns from a plurality of source code management system clients;
 - updating, by the server, the metadata for the requested file, and
 - sending, by the server, the one remote storage location address to the remote computer source code management system client, wherein the one remote storage location address where the requested file is located is more proximate to the remote computer source code management system client than to the server; and
 - updating, by the server, the metadata to indicate that the requested file is checked-out and locked.
2. (Currently amended) The method of claim 1, wherein the remote computer is a source code management system client and the remote storage location address share a subnet of the network.

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3. (Currently amended) The method of claim 2, wherein the one remote storage location address identifies a storage device that is at a geographical location closer to the remote computer source code management system client than a location of the metadata, and wherein based on the received request the server that received the request for checking-out the file from the remote computer source code management system client directly communicates the one remote storage location address for retrieval of the requested file to the network for transmission to the remote computer source code management system client.

4. (Currently amended) The method of claim 3, wherein the request is for checking-out the requested file corresponding to the filename, and the method further comprising:
locking the requested file;
returning a response code to the remote computer source code management system client indicating that file check-out is successful; and
updating the metadata indicating that the requested file is checked-out and locked.

5. (Currently amended) The method of claim 3 4, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in the requested file corresponding to the filename a second file, and the method further comprising:
updating the metadata indicating the requested second file is unlocked; and
returning a second response code indicating that the file check-in of the second file is successful.

6. (Currently amended) The method of claim 1, wherein a table maintains statistics for file usage, the method further comprising:

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processing a pattern of requests for the requested file received from ~~remote computers~~
source code management system clients at different geographical locations;
determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;
storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and
saving a correspondence between the requested file and storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

7. (Currently amended) The method of claim 6, wherein ~~one~~ the determined remote storage location is at a geographical location that is more proximate to the ~~remote computer~~ source code management system client having more requests for the requested file than other ~~remote computers~~ source code management system clients.

8. (Currently amended) The method of claim 6, wherein ~~one~~ the determined remote storage location is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each ~~remote computer~~ source code management system client and the ~~one~~ determined remote storage location based on the number of requests for the file from each ~~remote computer~~ source code management system client.

9. (Currently amended) The method of claim 1, wherein the ~~remote computer~~ is a source code management system client, and the request is one of check-in, extract, lock, unlock, delete, the method further comprising:
receiving an additional request corresponding to an additional file;
updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request;

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updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

10. (Currently amended) A method for accessing a file in a source code management system, the method comprising:

sending, from a source code management system client, a first request for checking-out the file to a server;

receiving, at the source code management system client, a storage location address containing the file in response to the first request, wherin the storage location address containing the file is located more proximate to the source code management system client than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, and wherein the storage location has been determined from the metadata by the server based on a history of request patterns from a plurality of source code management system clients;

sending, from the source code management system client, a second request to the storage location address; and

receiving, at the source code management system client, an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.

11. (Currently amended) The method of claim 10, wherein the first request is for checking-out the file, and the method further comprising:

downloading the file from the storage location address.

12. (Currently amended) The method of claim 10 or 11, wherein the a first third request is for checking-in the file, and the method further comprising:

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sending a new version of the file to the storage location address during the checking-in of the file.

13. (Currently amended) The method of claim 4 to 12, the method further comprising:
receiving a first response code from the server in response to the first request; and
receiving a second response code from the storage location in response to the second request; and
receiving a third response code from the server in response to the third request.

14. (Currently amended) A system for controlling and providing access to a files to remote computers source code management system clients over a network, wherein remote storage locations are accessible over the network, the system comprising:
metadata including information about files at the remote storage locations;
means for receiving a request for checking-out a file corresponding to a filename, from a remote computer a source code management system client over the network, wherein the request includes a filename corresponding to a requested file;
means for determining from the metadata one a storage location address of one a remote storage location associated with the filename where the requested file is located wherein the metadata corresponds to the files and is stored more proximate to the system than to the source code management system client, and wherein the remote storage location address is based on a history of request patterns from a plurality of source code management system clients;
means for updating the metadata for the requested file; and
means for sending the remote storage location address to the remote computer source code management system client, wherein the remote storage location address where the requested file is located is more proximate to the remote computer source code management system client than to the system; and

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means for updating the metadata to indicate that the requested file is checked-out and locked.

15. (Currently amended) The system of claim 14, wherein the ~~remote computer~~ is a source code management system client and the remote storage location address share a subnet of the network.

16. (Currently amended) The system of claim 15, wherein the storage location address identifies a storage device that is at a geographical location closer to the ~~remote computer~~ source code management system client than a location of the metadata, and wherein the system further comprises:

means for directly communicating the one storage location address for retrieval of the requested file to the network for transmission to the ~~remote computer~~ source code management system client, based on the received request for checking-out the file.

17. (Currently amended) The system of claim 16, wherein the request is for checking-out the requested file corresponding to the filename, and the system further comprising:
means for locking the requested file;
means for returning a response code to the ~~remote computer~~ source code management system client indicating that file check-out is successful, ; and
means for updating the metadata indicating that the requested file is checked-out and locked;

18. (Currently amended) The system of claim 16 or 17, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in the requested file corresponding to the filename a second file, and the system further comprising:

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means for updating the metadata indicating the requested second file is unlocked; and
means for returning a second response code indicating that the file check-in of the second file is successful.

19. (Currently amended) The system of claim 14, wherein a table maintains statistics for file usage, the system further comprising:

means for processing a pattern of requests for the requested file received from the remote computers source code management system clients at different geographical locations;

means for determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;

means for storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and

means for saving a correspondence between the requested file and the storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

20. (Currently amended) The system of claim 19, wherein one the determined remote storage location is at a geographical location that is more proximate to the remote computer source code management system client having more requests for the requested file than other remote computers source code management system clients.

21. (Currently amended) The system of claim 19, wherein one the determined remote storage location is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each remote computer source code management system client and the one determined remote storage location based on the number of requests for the file from each remote computer source code management system client.

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22. (Currently amended) The system of claim 14, wherein the remote computer is a source code management system client, and the request is one of check-in, check-out, extract, lock, unlock, delete the system further comprising:

means for receiving an additional request corresponding to an additional file;
means for updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request; and
means for updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

23. (Currently amended) A system for accessing a file in a source code management system, wherein the system is in communication with a server, the system comprising:

means for sending a first request for checking-out the file to the server;
means for receiving a storage location address containing the file in response to the first request, wherein the storage location address containing the file is located more proximate to the system than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the system, and wherein the storage location has been determined from the metadata by the server based on a history of request patterns from a plurality of source code management system clients;

means for sending a second request to the storage location address; and
means for receiving an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.

24. (Currently amended) The system of claim 23, wherein the first request is for checking-out the file, and the system further comprising:

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means for downloading the file from the storage location address.

25. (Currently amended) The system of claim 23 24, wherein the first a third request is for checking-in the file, and the system further comprising:

means for sending a new version of the file to the storage location address during the checking-in of the file.

26. (Currently amended) The system of claim 23 25, the system further comprising:
means for receiving a first response code from the server in response to the first request; and

means for receiving a second response code from the storage location in response to the second request; and

means for receiving a third response code from the server in response to the third request.

27. (Currently amended) An article of manufacture including code for controlling and providing access to a files at storage locations on a network to a remote-computer source code management system client coupled to a server over the network, wherein the code is capable of causing operations, the operations comprising:

maintaining metadata about files maintained at remote storage locations;

receiving a request, at the server, for checking-out a file corresponding to a filename from the remote-computer source code management system client over the network, wherein the request includes a filename corresponding to a requested file;

determining from the metadata, by the server, one a remote storage location address associated with the filename where the requested file is located, wherein the metadata corresponds to the files and is stored more proximate to the server than to the source code

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management system client, and wherein the remote storage location address is based on a history of request patterns from a plurality of source code management system clients;

~~updating, by the server, the metadata for the requested file; and~~

sending, by the server, the remote storage location address to the remote computer source code management system client, wherein the one remote storage location address where the requested file is located is more proximate to the remote computer source code management system client than to the server; and

updating, by the server, the metadata to indicate that the requested file is checked-out and locked.

28. (Currently amended) The article of manufacture of claim 27, wherein the remote computer is a source code management system client and the remote storage location address share a subnet of the network.

29. (Currently amended) The article of manufacture of claim 28, wherein the one storage location address identifies a storage device that is at a geographical location closer to the remote computer than a location of the metadata, and wherein based on the received request the server that received the request for checking-out the file from the remote computer source code management system client directly communicates the one storage location address for retrieval of the requested file to the network for transmission to the remote computer source code management system client.

30. (Currently amended) The article of manufacture of claim 29, wherein the request is for checking-out the requested file corresponding to the filename, and the operations further comprising:

locking the requested file;

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returning a response code to the remote computer source code management system client indicating that file check-out is successful; and

updating the metadata indicating that the requested file is checked-out and locked.

31. (Currently amended) The article of manufacture of claim 29 30, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in the requested file corresponding to the filename a second file, and the operations further comprising:

updating the metadata indicating the requested second file is unlocked; and

returning a second response code indicating that the file check-in of the second file is successful.

32. (Currently amended) The article of manufacture of claim 27, wherein a table maintains statistics for file usage, the operations further comprising:

processing a pattern of requests for the requested file received from remote computers source code management system clients at different geographical locations;

determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;

storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and

saving a correspondence between the requested file and the storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

33. (Currently amended) The article of manufacture of claim 32, wherein one the determined remote storage location is at a geographical location that is more proximate to the remote computer source code management system client having more requests for the requested file than other remote computers source code management system clients.

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34. (Currently amended) The article of manufacture of claim 32, wherein one the determined remote storage location is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each remote computer source code management system client and the remote storage location based on the number of requests for the file from each remote computer source code management system client.

35. (Currently amended) The article of manufacture of claim 27, wherein the remote computer is a source code management system client, and the request is one of check-in, check-out, extract, lock, unlock, delete, the operations further comprising:
receiving an additional request corresponding to an additional file;
updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request; and
updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

36. (Currently amended) An article of manufacture including code for accessing a file in a source code management system from a source code management system client to a server, wherein the code is capable of causing operations, the operations comprising:
sending, from the source code management system client, a first request for checking-out the file to the server;
receiving, at the source code management system client, a storage location address containing the file in response to the first request, wherein the storage location address containing the file is located more proximate to the source code management system client than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, and wherein the storage location has been determined

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from the metadata by the server based on a history of request patterns from a plurality of source code management system clients;

 sending, from the server source code management system client, a second request to the storage location address; and

 receiving, at the source code management system client, an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.

37. (Currently amended) The article of manufacture of claim 36, wherein the first request is for checking-out the file, and the operations further comprising:
 downloading the file from the storage location address.

38. (Currently amended) The article of manufacture of claim 36 37, wherein the first a third request is for checking-in the file, and the operations further comprising:
 sending a new version of the file to the storage location address during the checking-in of the file.

39. (Currently amended) The article of manufacture of claim 36 38, the operations further comprising:
 receiving a first response code from the server in response to the first request; and
 receiving a second response code from the storage location in response to the second request; and
 receiving a third response code from the server in response to the third request.

40. (Currently amended) The method of claim 1, wherein the remote computer is a source code management system client, wherein the metadata is kept more proximate to the server than to the source code management system client, wherein the server communicates the one storage

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location address to the network for transmission to the source code management system client;
and wherein the one storage location is determined by the server based on a history of request
patterns from a plurality of source code management system clients wherein the source code
management system client is a first source code management system client, wherein the first
source code management system client and a second source code management system client are
included in the plurality of source code management system clients, wherein the first source code
management system client is in a first subnet of the network, wherein the second source code
management system client is in a second subnet of the network, wherein the remote storage
location address sent by the server is in the first subnet of the network, the method further
comprising:

sending, by the server, an additional remote storage location address that is in the second
subnet to the second source code management system client, in response to an additional request
from the second source code management system client for checking-out an additional file.

41. (Currently amended) The method of claim 10, wherein the client is a source code management system client, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, wherein the server communicates the storage location address to the network for transmission to the source code management system client, and wherein the storage location is determined by the server based on a history of request patterns from a plurality of source code management system clients wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, the method further comprising:

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sending, from the second source code management system client, an additional request for checking out an additional file to the server; and

receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.

42. (Currently amended) The system of claim 14, wherein the remote computer is a source code management system client, wherein the metadata is more proximate to the system than to the source code management system client, the system further comprising:

means for communicating the one storage location address to the network for transmission to the source code management system client; and

means for determining the one storage location based on a history of request patterns from a plurality of source code management system clients wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address sent by the server is in the first subnet of the network, the system further comprising:

means for sending, by the server, an additional remote storage location address that is in the second subnet to the second source code management system client, in response to an additional request from the second source code management system client for checking-out an additional file.

43. (Currently amended) The system of claim 23, wherein the system is a source code management system client, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, wherein the server communicates

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the storage location address to a network for transmission to the source code management system client, and wherein the storage location is determined by the server based on a history of request patterns from a plurality of source code management system clients wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, the system further comprising:

means for sending, from the second source code management system client, an additional request for checking out an additional file to the server; and

means for receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.

44. (Currently amended) The article of manufacture of claim 27, wherein the remote computer is a source code management system client, wherein the metadata is kept more proximate to the server than to the source code management system client, wherein the server communicates the one storage location address to the network for transmission to the source code management system client, wherein the one storage location is determined by the server based on a history of request patterns from a plurality of source code management system clients wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the

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remote storage location address sent by the server is in the first subnet of the network, the operations further comprising:

sending, by the server, an additional remote storage location address that is in the second subnet to the second source code management system client, in response to an additional request from the second source code management system client for checking-out an additional file.

45. (Currently amended) The article of manufacture of claim 36, wherein the client is a source code management system client, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, wherein the server communicates the storage location address to the network for transmission to the source code management system client, wherein the storage location is determined by the server based on a history of request patterns from a plurality of source code management system clients wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, the operations further comprising:

sending, from the second source code management system client, an additional request for checking out an additional file to the server; and

receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.